

VAID ICS LUCKNOW  
DAILY CURRENT QUIZ FOR UPSC

18/11/2024

EXPLANATION

Qn. 1

Answer: d. 1 only

**Explanation:**

**Statement 1 is correct:** RF quantifies the energy imbalance in the Earth's climate system caused by factors like greenhouse gases or aerosols.

**Statement 2 is incorrect:** Positive RF results in warming, while negative RF leads to cooling.

**Statement 3 is incorrect:** Aerosols can cause negative RF (cooling) by reflecting sunlight or positive RF by absorbing sunlight (e.g., black carbon).

Qn.2 Answer: b)

1 and 2 only

**Explanation:**

**Statement 1 is correct:** CH<sub>4</sub> is more potent than CO<sub>2</sub> as a greenhouse gas molecule, but its atmospheric concentration is lower.

**Statement 2 is correct:** CO<sub>2</sub> contributes more to RF overall due to its abundance in the atmosphere.

**Statement 3 is incorrect:** Water vapor amplifies warming as a feedback effect, but it is not directly emitted by human activities at a significant scale.

Qn. 3

**Answer: (d) Only 2 & 3**

**Explanation:**

**Statement 1 is incorrect:** Hypersonic missiles travel at speeds of Mach 5 or above, not Mach 1. Mach 1 is the speed of sound, while hypersonic speeds are five times faster than the speed of sound.

**Statement 2 is correct:** Hypersonic missiles can maneuver mid-flight, making them extremely difficult to detect and intercept using current defense systems.

Statement 3 is correct: Hypersonic technology includes glide vehicles (HGVs) and cruise missiles propelled by scramjet engines.

Qn. 4

**Answer: a.**

**Explanation:**

- HCMs are powered throughout their flight by air-breathing engines like scramjets, allowing sustained hypersonic speeds.
- They typically fly at lower altitudes than ballistic missiles, making them harder to detect.
- HCMs are generally slower than HGVs but are still difficult to intercept due to their speed and maneuverability

Qn. 5

Correct Answer: (d) 1, 2, and 3

**Explanation:**

- The Arms (Amendment) Act, 2019, reduces the legal limit for firearm possession from three to two.
- It introduces harsher penalties, including life imprisonment for serious offenses such as illegal arms trafficking and using prohibited firearms.
- The Act makes manufacturing or trading firearms without a valid license a punishable offense.

